

REMARKS/ARGUMENTS

1. Claims 39-47 are pending herein. Claims 42-45 have been withdrawn from consideration by the PTO as being drawn to a non-elected species, but are being maintained because each claim depends directly or indirectly from claim 39. New claim 47 has been added as supported by, for example, original specification page 4, paragraph [0013].

Applicants' representative (Steven Caldwell) made several attempts to schedule a telephonic interview for the present application. Examiner Vu left a phone message on April 2, 2004 stating that she has been out of the office and the only date that she would be available to conduct the interview would be on April 6, 2004 (the due date for responding to the pending Office Action). Applicants' representative left a phone message for Examiner Vu on April 6, 2004, but she did not respond in time to conduct the interview on that date. Examiner Vu is requested, therefore, to contact Applicants' representative to schedule a mutually convenient date to conduct a telephonic interview before issuing any subsequent Office Action with respect to the present application.

Claims 39-41 and 46 were rejected under §103(a) over Hayes et al. in view of Zhu et al. This rejection is respectfully traversed.

Pending independent claim 39 recites, among other things, a connection construction including a planar antenna that is electrically and/or mechanically connected to a circuit board by detachably inserting elastically deformable pins into through holes in the circuit board. As discussed in the Amendment filed October 10, 2003, one benefit associated with the claimed connection construction is secure, reliable and excellent electrical/mechanical connection between the planar antenna and the circuit board, without the need to employ a brazing material for such connection purposes. As is shown below, skilled artisans would have had

absolutely no reason to modify Hayes with the connector structure shown in Zhu for the purpose of making Hayes' ground and signal feeds detachable, as claimed.

The PTO states on page 6 of the Office Action that "even if the elastically deformable pins of Zhu are not easily detachable or even if it was not desirable to detach these pins from the circuit board, it is believed that the claim language is met, as these deformable pins are detachable." This type of reasoning, which corresponds to a §102 anticipation analysis, is clearly erroneous in the context of a §103 obviousness analysis. The Federal Circuit provides guidance for the PTO on how to perform a proper obviousness analysis in *In re Rouffet*, 47 USPQ2d 1453, 1457-8 (CAFC 1998):

As this court has stated, "virtually all [inventions] are combinations of old elements." *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 698, 218 USPQ 865, 870 (Fed. Cir. 1983); *see also Richdel, Inc. v. Sunspool Corp.*, 714 F.2d 1573, 1579-80, 219 USPQ 8, 12 (Fed. Cir. 1983) ("Most, if not all, inventions are combinations and mostly of old elements."). Therefore an examiner may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be "an illogical and inappropriate process by which to determine patentability." *Sensonics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1570, 38 USPQ2d 1551, 1554 (Fed. Cir. 1996). To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. ***In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed*** (emphasis added).

The PTO's direct comparison between Applicants' claim language and the Zhu patent (discussed above), while, at the same time, apparently acknowledging the reasons why skilled artisans would not use the structure in Zhu to modify Hayes' ground and signal feeds to be detachable from the circuit board (i.e., poorer electrical connection), is improper in the

context of a §103 analysis. Again, since the primary reference (Hayes) does not include an antenna having detachable ground and signal feeds, the PTO is required to show the reasons why skilled artisans would modify Hayes' antenna structure with the connection structure shown in Zhu to obtain detachable ground and signal feeds. The PTO has failed to do this. Applicants respectfully submit that, contrary to the statement on page 6 of the Office Action, if Zhu's engagement means were not easily detachable or even if it was not desirable to detach Zhu's engagement means from the circuit board, skilled artisans, when confronted with the problem of finding a way to detachably connect antenna pins to a circuit board and still maintain adequate electrical and mechanical connection between the antenna and circuit board, would have had absolutely no reason to modify Hayes' antenna structure using the connecting structure disclosed by Zhu. This is especially true since Zhu's engaging means is not designed to be "detachably" inserted into the circuit board, as is apparently acknowledged by the PTO on pages 5 and 6 of the Office Action. Applicants respectfully submit that removing Zhu's solder-connected engaging means would scape brazing material from the circuit board through hole inner walls, which, in turn, would undesirably affect the electrical and mechanical connection between the antenna and the circuit board (e.g., the through hole diameter would increase to produce a looser mechanical connection). It is clear, therefore, when analyzed properly under §103, the PTO's alleged combination of Zhu and Hayes is not legally supportable under §103 and thus should be withdrawn.

In view of all of the foregoing, reconsideration and withdrawal of the §103(a) rejection are respectfully requested.

New dependent claim 47 has been added to further distinguish the present application from the PTO's asserted combination of applied prior art. For example, new claim 47 recites that inner surfaces of the circuit board through holes are free from a brazing material. It is

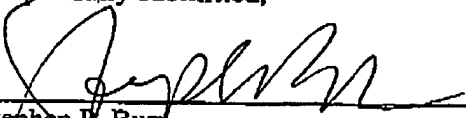
clear that Zhu discloses soldering connections between the electrical connector and the mating circuit board. Accordingly, new dependent claim 47 provides further patentable distinctions over the alleged combination of Zhu and Hayes because, even if those references were combined as asserted in the Office Action, there would still be no disclosure or suggestion of circuit board through holes that are free from a brazing material, as claimed.

If Examiner Vu believes that contact with Applicants' attorney would be advantageous toward the disposition of this case, she is herein requested to call Applicants' attorney at the phone number noted below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

Respectfully submitted,

April 6, 2004
Date


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